



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,681	11/21/2003	Harry J. Scofield	FMC-1035	1305

42419 7590 09/13/2005

PAULEY PETERSEN & ERICKSON  
2800 WEST HIGGINS ROAD  
SUITE 365  
HOFFMAN ESTATES, IL 60195

EXAMINER

CHAN, SING P

ART UNIT	PAPER NUMBER
----------	--------------

1734

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/719,681

**Applicant(s)**

SCOFIELD ET AL.

**Examiner**

Sing P. Chan

**Art Unit**

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 10, 15, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuuzaburou et al (JP 54-123172) in view of Burkett et al (U.S. 6,383,608).

Regarding claims 1 and 10, Yuuzaburou et al discloses a method of coating a refrigerator. The method includes providing a rough cloth with intersecting elements forming a plurality of openings, coating the cloth with tackifier, i.e. adhesive, using the rough cloth to line to the wall of the refrigerators and applying foam layer such as urethane layer or a polyurethane layer. (See English translation of JP 54-123172, Page 2, line 19 to Page 3, line 3 and Page 4, lines 9-12) Yuuzaburou et al is silent as to the coating the cloth with polyurea coating. However, a polyurethane or polyurea foam coating is well known and conventional as shown for example by Burkett et al. Burkett et al discloses a method of forming foam with enhanced fire resistance. The foam includes polyurethane, phenol-formaldehyde, and polyuria, (which the examiner believes is a typo in the patent and should be polyurea), which are all equivalents (Col 12, lines 10-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide any foam coating such as polyurethane or polyurea as disclosed by Burkett et al in the method of Yuuzaburou et al to provide any foam material such as polyurethane or polyurea, which are all equivalents.

Regarding claims 15 and 20, Yuuzaburou et al discloses a liner for a refrigerator. The coating includes a rough cloth with intersecting elements forming a plurality of openings, coating with a tackifier, i.e. adhesive, attached to the wall of the refrigerators as a lining and applying foam such as urethane layer or a polyurethane layer. (See English translation of JP 54-123172, Page 2, line 19 to Page 3, line 3 and Page 4, lines 9-12) Wherein the recitation of protective coating in the preamble is intended use and required the coating be capable of being use as a protective coating. The coating as recited by Yuuzaburou et al is capable of being use as a protective coating.

Yuuzaburou et al is silent as to the coating includes polyurea foam. However, a polyurethane or polyurea foam coating is well known and conventional as shown for example by Burkett et al. Burkett et al discloses a method of forming foam with enhanced fire resistance. The foam includes polyurethane, phenol-formaldehyde, and polyuria, (which the examiner believes is a typo in the patent and should be polyurea), which are all equivalents (Col 12, lines 10-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide any foam coating such as polyurethane or polyurea as disclosed by Burkett et al in the method of Yuuzaburou et al to provide any foam material such as polyurethane or polyurea, which are all equivalents.

Art Unit: 1734

Regarding claim 17, Yuuzaburou et al discloses using a tackifier, i.e. adhesive to adhere the cloth to the wall. (See English translation of JP 54-123172, page 2, lines 18-20)

3. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuuzaburou et al (JP 54-123172) in view of Burkett et al (U.S. 6,383,608) as applied to claim 15 above, and further in view of Toshio (JP 57-104747).

Regarding claims 18 and 19, Yuuzaburou et al as modified above is silent as to the screen is a wire mesh or metal netting. However, providing a screen as a wire mesh or metal netting is well known and conventional as shown for example by Toshio. Toshio discloses the screen attached to the wall is a wire lath, i.e. wire mesh, metal netting, rough unwoven cloth, rough woven cloth, or nylon, are all equivalents. (See English Translation of JP 57-104747, page 2, lines 19-23)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the screen as a wire mesh, metal netting, rough unwoven cloth, rough woven cloth as disclosed by Toshio in the coating of Yuuzaburou et al as modified by Burkett et al to provide a netting material, which are all equivalents.

4. Claims 3-8, 11-13, 16, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuuzaburou et al (U.S. 3,893,956) in view of Burkett et al (U.S. 6,383,608) as applied to claims 1 and 15 above, and further in view of Zimmerman et al (U.S. 5,189,075).

Regarding claims 3-5 and 16, Yuuzaburou et al as modified above is silent as to composition of the polyurea is a two-components polyurea with first composition

Art Unit: 1734

comprising N,N dialkylamino diphenylmethane, diethyltoluenediamine, poly(oxy(methyl-1,2-ethanediyl), Alpha-(2-aminomethylethyl) omega-(2-aminomethylethoxy), glyceryl poly(oxypropylene) triamine, diphenylmethane diisocyanate, modified MDI and MDI homopolymer and the percentage of each compounds. However, using these compounds to form polyurea coating is well known and conventional as shown for example by Zimmerman et al. Zimmerman et al discloses a coating and method of forming the coating by combining two components with the composition of UNILINK 4200, JEFFAMINE D2000, JEFFAMINE T5000, ETHACURE 100, and RUBINATE, which are the same compounds as recited above with the range of percentage of composition of each components. (Col 7, line 35 to Col 9, line 35 and Table II)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide UNILINK 4200, JEFFAMINE D2000, JEFFAMINE T5000, ETHACURE 100, and RUBINATE as N,N dialkylamino diphenylmethane, diethyltoluenediamine, poly(oxy(methyl-1,2-ethanediyl), Alpha-(2-aminomethylethyl) omega-(2-aminomethylethoxy), glyceryl poly(oxypropylene) triamine, diphenylmethane diisocyanate, modified MDI and MDI homopolymer as disclosed by Zimmerman et al in the coating and method of Yuuzaburou et al as modified by Burkett et al to provide a coating with light stability, fast cure, water insensitivity, excellent physical properties such as tensile strength and abrasion resistance, easy application such as spray application and long term storage stability. (Col 1, lines 19-27)

Regarding claims 8 and 13, Yuuzaburou et al is silent as to the reaction of forming the polyurea coating is cured at a temperature of 150°C. However, curing the

coating at 150°C and applying the coating at ambient temperatures are well known and conventional as shown for example by Zimmerman et al. Zimmerman et al discloses the polyurea coating is heated to 150°C as the coating is applied and post curing by heating, (Col 6, line 67 to Col 7, line 5 and Col 9, lines 12-36) and the reaction of the polyurea requires heating and one in the art would appreciate application of the coating at ambient to allow faster reaction and curing of the coating.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to logically coat the surface at ambient temperatures and heating the polyurea to cure the coating as disclosed by Zimmerman et al in the method of Yuuzaburou et al as modified by Burkett et al to allow for faster heating and curing of the coating.

Regarding claims 6 and 11, Yuuzaburou et al as modified above recited applying the polyurea coating by spray application, but is silent as to the mixing the composition under pressure. However, mixing the polyurea coating under pressure is well known and conventional as shown for example by Zimmerman et al. Zimmerman et al discloses forming a polyurea composition by spray mixing with each line pressure ranged from 1000-2000 psig. (Col 9, lines 24-34 and Col 10, 10-16)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to mix the composition under pressure as disclosed by Zimmerman et al in the method of Yuuzaburou et al as modified by Burkett et al to provide a polyurea for spray applications as foam with fast cure, excellent properties such as tensile strength and abrasion resistance, and ease of application. (Col 1, lines 17-27)

Regarding claim 7, Yuuzaburou et al discloses the foam coating is sprayed onto the cloth, which the coating is under pressure as it is applied. (See English Translation Page 5, lines 1-4)

Regarding claim 12, Yuuzaburou et al as modified above is silent as to heating the two components of the coating prior to mixing. However, heating the components of the coating prior to mixing is well known and conventional as shown for example by Zimmerman et al. Zimmerman et al discloses heating the components prior to mixing to form the polyurea. (Col 8, lines 32-45)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the components prior to mixing as disclosed by Zimmerman et al in the method of Yuuzaburou et al as modified by Burkett et al to provide a polyurea for spray applications as foam with fast cure, excellent properties such as tensile strength and abrasion resistance, and ease of application. (Col 1, lines 17-27)

Regarding claims 21 and 22, Yuuzaburou et al as modified by combination of references is silent as to specific concentration of the materials for the polyurea coating. However, one of ordinary skill in the art would appreciate the specific concentration of the material can be obtain by routine experimentation. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to obtain the optimum or workable ranges or specific concentration

of materials for the polyurea coating in the method of Yuuzaburou et al as modified by combination of references to improve upon what is already generally known. In re Hoeschele, 406 F.2d 1403, 160 USPQ 809(CCPA 1969)

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuuzaburou et al (U.S. 3,893,956) in view of Burkett et al (U.S. 6,383,608) as applied to claim 1 above, and further in view of BlasterMaster.

Yuuzaburou et al is silent as to cleaning the surface of the wall with soda blasting prior to applying the coating. However, cleaning a surface prior to coating is well known and conventional as shown for example by BlasterMaster. BlasterMaster discloses a method of cleaning the surface with soda blasting to remove residue, paint, oil, grease or cleaning the surface, which provide a clean surface for coating. (See BlasterMaster, Page 1)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a clean surface by soda blasting as disclosed by BlasterMaster in the method of Yuuzaburou et al as modified by Burkett et al to clean the surface without harming the substrate or the environment.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuuzaburou et al (U.S. 3,893,956) in view of Burkett et al (U.S. 6,383,608) as applied to claim 10 above, and further in view of Mitsuhiro (JP 07-99949).

Yuuzaburou et al as modified above is silent as to sanitizing the cured polyurea coating with a controlled steam injection. However, sanitizing using steam injection is well known and conventional as shown for example by Mitsuhiro. Mitsuhiro discloses

sanitizing a freezer with steam, which with the polyurea coating applied to the refrigerator or freezer wall would also sanitize the coating. (See English Machine Translation of JP 07-99949, Page 1, paragraphs 6 and 7)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to sanitize the refrigerator or freezer with the polyurea coating as disclosed by Mitsuhiro in the method of Yuuzaburou et al as modified by Burkett et al to prevent adhesive of microorganism on the wall surface. (See English Machine Translation of JP 07-99949, Page 1, paragraph 2)

### ***Response to Arguments***

7. Applicant's arguments filed April 18 2005 have been fully considered but they are not persuasive.
8. Applicant's argument of the coating of Yuuzaburou et al is not a protective coating. The recitation of the protective coating in the preamble of the claim is intended use and only requiring the coating as disclosed by Yuuzaburou et al capable of being use as a protective coating.
9. In response to applicant's argument of Zimmerman et al does not disclose the polyurea coating may be utilized for a freezer enclosure. However, the combination of Yuuzaburou et al and Burkett et al provided the teaching of using polyurea foam for a refrigerators or freezers. The examiner relied on Zimmerman et al to provide the general teaching of material for forming the polyurea foam coating.
10. In response to applicant's argument of Zimmerman does not recite the same material. The examiner disagree with applicant since the example as recited by

Art Unit: 1734

Zimmerman is the same material as recited in the instant application. And therefore, would be using the same material as recited in the claim.

11. In response to applicant's argument of Zimmerman does not heat the polyurea coating composition prior mixing. Zimmerman discloses the polyurea coating are mixed by spray mixing and the block and hose is heated to 150 ° F. (Col 9, lines 24-30)

12. Applicant's arguments, see Page 13, lines 14-19, filed April 18, 2005, with respect to the rejection(s) of claim(s) 1, 10, 15, and 20 under 35 U.S. C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Burkett et al (U.S. 6,383,608).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sing P. Chan whose telephone number is 571-272-1225. The examiner can normally be reached on Monday-Thursday 7:30AM-11:00AM and 12:00PM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher A. Fiorilla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1734

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Chan Sing P*

SPC

*CA FIORILLA*

CHRIS FIORILLA  
SUPERVISORY PATENT EXAMINER

*AU 1734*